

REMARKS

Claims 1 and 67 are amended. Claim 84 is added. Claims 1-13, 67-80 and 84 are pending in the application.

Claims 1-13, 67-69 and 71-80 stand rejected as being unpatentable over Dunlop, U.S. Patent No. 5,590,389. The rejection over Dunlop includes anticipation under 35 U.S.C. § 102(b) and/or obviousness under 35 U.S.C. § 103(a). The Examiner is reminded by direction to MPEP § 2131 that anticipation requires each and every element of a claim to be disclosed in a single prior art reference. The Examiner is further reminded by direction to MPEP § 2143 that a proper obviousness rejection has the following three requirements: 1) There must be some suggestion or motivation to modify or combine reference teachings; 2) there must be a reasonable expectation of success; and, 3) the combined references must teach or suggest all of the claim limitations. These three requirements must be shown by the Examiner in order to establish a prima facie case of obviousness. Claims 1-13, 67-69 and 71-80 are allowable over Dunlop for at least the reason that Dunlop fails to disclose or suggest each and every limitation in any of those claims, and fails to provide a basis for a reasonable expectation of success.

As amended, independent claim 1 recites a physical vapor deposition target having a face centered cubic unit cell, having a sputtering surface with a predominate <220> crystallographic texture across the sputtering surface, an average grain size across the sputtering surface of less than or equal to about 30 microns, and a (220) plane intensity of at least about 60%. The amendment to claim 1 is supported by the specification at, for example, Figs. 6, 9A, 13A and 14, and the corresponding text. Dunlop discloses controlling textures utilizing equal channel angular extrusion processing (col. 8, lines 11-

15). Dunlop further discusses producing a predominately <220> texture by inducing a (220) plane intensity which is greater than the (200) plane intensity (col. 8, lines 55-63). The (220) plane intensities achieved by processing according to Dunlop are presented at Fig. 11 and are discussed at col. 8, lines 55-57. As presented in Fig. 11, the strongest (220) plane intensity occurs in sample 2B. This (220) intensity appears to be approximately 50%. Accordingly, Dunlop does not disclose or suggest the claim 1 recited (220) plane intensity of at least about 60%. Further Dunlop does not provide a reasonable expectation of achieving the claim 1 recited physical vapor deposition target having a (220) plane intensity of at least 60%. Accordingly, independent claim 1 is not anticipated by or rendered obvious by Dunlop and is allowable over this reference.

Dependent claims 2-13 are allowable over Dunlop for at least the reason that they depend from base allowable claim 1.

Amendment of independent claim 67 includes removal of process limitations such that the claim is no longer a product-by-process claim. As amended, independent claim 67 recites a physical vapor deposition target comprising a copper material with a base centered cubic unit cell having a (220) plane intensity of at least 60%. Independent claim 67 is allowable over Dunlop for at least reasons similar to those discussed above with respect to independent claim 1.

Dependent claims 68-69 and 71-80 are allowable over Dunlop for at least the reason that they depend from allowable base claim 67.

Dependent claim 70 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Dunlop in view of Segal, U.S. Patent No. 6,238,494. As discussed above, independent claim 67 is not rendered obvious by Dunlop. Referencing previous

Actions, the Examiner indicates that Segal is relied upon as showing sputtering targets comprising silver. Segal further discloses methods to achieve uniform textures (col. 2, lines 7-11 and col. 6, lines 44-48). However as combined with Dunlop, the Segal disclosure of uniform texture and targets which may comprise silver does not contribute toward suggesting the claim 67 recited target comprising a face centered cubic unit cell copper material having a (220) plane intensity of at least 60%. Nor does Segal contribute toward providing a basis for a reasonable expectation of achieving the claim 67 recited target. Accordingly, independent claim 67 is not rendered obvious by the cited combination of Dunlop and Segal. Dependent claim 70 is allowable over Dunlop in view of Segal for at least the reason that it depends from allowable base claim 67.

New claim 84 does not add "new matter" to the application since such is fully supported by the specification as originally filed. Claim 84 is supported by the specification at, for example, Fig. 6; Fig. 9A; Fig. 13A; Fig. 14; the text accompanying such Figs; and, page 10, lines 14-19.

For the reasons discussed above, claims 1-13 and 67-80 are allowable and claim 84 is believed allowable. Accordingly, applicant respectfully requests formal allowance of pending claims 1-13, 67-80 and 84 in the Examiner's next Action.

Respectfully submitted,

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